The Legal Regime Governing Sea Transport of Ultrahazardous Radioactive Materials

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Although the international community has taken some steps to address the risks created by the movements of ultrahazardous radioactive cargoes, important gaps still exist in the legal regime governing these activities. An apparent consensus has been reached at the International Maritime Organization (IMO) to make the Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium, and High-Level Radioactive Wastes in Flasks Aboard Ships (the INF Code) mandatory and to seek some clarification of the standards governing shipboard safety. But still lacking are agreements regarding salvage responsibilities, liability of shippers for damages, revision of transport cask safety standards to meet maritime accident conditions, obligations to consult regarding the best routes and to provide advance notification to concerned coastal states, the preparation of environmental assessments, and contingency planning to handle shore emergencies and salvage responsibilities. Until agreements are reached on these important matters, the shipment of these extremely dangerous or “ultrahazardous” materials will continue to violate fundamental norms of international law and comity because they place coastal nations that receive no benefit from the shipments at grave risk of environmental disaster without any legal protections.

Because the shipments of ultrahazardous radioactive cargoes are increasing, it is highly advisable for concerned nations to negotiate regional protocols delineating the legal regime that applies to these maritime transports. A draft model protocol is attached at the end of this article which may provide guidance on this effort. It is also appropriate for concerned nations to consider bringing a claim against the shipping nations under the dispute resolution mechanisms established by the 1982 United Nations Law of the Sea Convention. Such a claim would be based on the failure of the shipping nations to comply with their obligations under the convention to prepare and distribute environmental impact assessments, consult with affected nations, prepare emergency contingency plans, and agree to an effective liability regime in the event of an accident. Because of the grave potential risks created by these shipments and because of the failure of the shippers to meet their obligations to protect coastal nations from these risks, coastal nations may be justified under international law to take unilateral or regional action to block future shipments.

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Introduction: The Safety Fears Raised by a New Category of Cargo

During the past decade, international fears have been caused by a new cycle of sea shipments of large cargoes of highly radioactive or radiotoxic nuclear materials. In November 1992, Japan shipped 2,200 pounds (one metric ton) of plutonium in a refitted freighter called the Akatsuki Maru from France to Japan, going around the Cape of Good Hope in Africa and then south of Australia and New Zealand before turning north to traverse the Pacific to Japan. In February 1995, the British vessel Pacific Pintail carried 28 canisters of vitrified high-level nuclear waste (HLW) in glass blocks, each weighing 1,000 pounds, going around Cape Horn at the tip of South America and then across the Pacific. In early 1997, the British vessel Pacific Teal carried 40 such canisters, going around Africa and then up through the Tasman Sea. In January 1998, the British vessel Pacific Swan carried 60 HLW canisters, going through the Caribbean and then through the Panama Canal. The Pacific Swan made a similar voyage in March 1999, carrying 40 cylinders of HLW through the Mona Passage (between Puerto Rico and the Dominican Republic) and then through the Panama Canal.

From July 21 to September 27, 1999, the Pacific Pintail and the Pacific Teal traveled from France to Japan carrying 446 kilograms of weapons-usable plutonium contained in 40 mixed plutonium/uranium oxide (MOX) fuel elements. This transport was routed around the Cape of Good Hope in South Africa, across the southern Indian Ocean, and then up through the Tasman Sea and the western Pacific Islands to Japan. Because each vessel was armed with three 30 mm cannons (with a 10-kilometer range), assault rifles, shotguns, hand weapons, body armor, gas masks, and a high-speed armed boat staffed by 13 U.K. Atomic Energy Authority officers, they were deemed to be providing armed escort for each other, although it is hard to imagine that a vessel carrying the MOX fuel could effectively protect another vessel by chasing after or interfering with an attack by a terrorist vessel. The ships “adhered to a request by the [South African] government to stay out of South Africa’s territorial waters and its larger marine EEZ.” One crew member suffered a damaged collarbone and a head injury when he fell during heavy seas in the South Indian Ocean and was airlifted by helicopter to Australia on August 28, 1999.

The Pacific Swan left Cherbourg, France on December 29, 1999, carrying 104 containers of vitrified HLW and traveled through the Caribbean Sea and Panama Canal, on its way to Japan. A year later, the Swan again made the journey, this time with the largest cargo of nuclear waste ever carried: 192 canisters of HLW, and this time traveling around Cape Horn at the tip of South America, arriving in Japan in February 2001. Almost simultaneously, the Pacific Pintail and the Pacific Teal went around the world the other way, around the Cape of Good Hope at the tip of Africa, carrying 230 kilograms of plutonium and four tons of uranium contained in 28 MOX fuel assemblies. During this shipment, European transport officials suggested that one or two such shipments of plutonium fuel will be made each year for the next 15 years.

These shipments present risks of a magnitude totally different from any previous ocean cargoes. Each of the nuclear waste canisters contains 17,000 terabecquerels in beta-gamma activity. The Pacific Swan, for instance, carried a staggering 96,000,000 curies of radioactivity when it traveled around Cape Horn in January 2001. The MOX fuel on the 1999 and 2001 shipments of the Pacific Teal and Pacific Pintail could be easily converted to provide the materials needed to build dozens of nuclear weapons. These long-lived, highly radioactive and radiotoxic nuclear materials could endanger large coastal populations or produce widespread, long-term radioactive contamination of the marine environment. They are extremely difficult to handle and the equipment necessary to salvage them in the event of an accident has not yet been developed.
British representatives acknowledge that in the event of a vessel sinking “it was quite apparent that recovery from some places would not be possible.” But a sinking may not be the most dangerous foreseeable event. If a vessel carrying such a cargo collided with another vessel causing an intensely hot and long-lasting shipboard fire, then radioactive particles could become airborne, putting all nearby lifeforms in grave danger of catastrophic health impacts.

These cargoes are not, therefore, just another “dangerous goods.” They are truly “ultrahazardous,” and require a focused and comprehensive legal regime designed to internalize the real costs of the shipments and to ensure that the risks they create are not transferred from those that benefit from these shipments to those who gain nothing from them. Because of their concerns, a number of South American countries, such as Chile in 1995, have objected to the nuclear transports traveling through their territorial waters and exclusive economic zones (EEZs). In August 1998, Argentina and Chile conducted joint naval exercises to prepare for a hypothetical accident in which a ship carrying ultrahazardous radioactive materials collided with an iceberg.

The concerns that coastal and island nations have expressed have been intensified by the accidental chain reaction that occurred in the Tokaimura nuclear fuel fabrication plant on September 30, 1999, lasting 17–20 hours and seriously injuring three employees (two of whom subsequently died), exposing at least 63 other persons to radiation, requiring families near the plant to evacuate their homes, and keeping another 300,000 in the surrounding area indoors for more than 24 hours. The accident itself was tragic enough, but the details regarding the incident presented “a picture of a plant out of control,” with safety concerns given substantially less attention than they require. Particularly disturbing was the revelation that the officials running the nuclear plant had not made any preparations for the accident that occurred, because they did not expect one.

Also disturbing was the revelation in September 1999 that British Nuclear Fuels had faked quality-control checks on at least 10 lots of MOX cylindrical pellets in order to save time. After a shipment of MOX fuel containing pellets of dubious quality reached Japan, Japanese authorities pressed the British to take them back, and in July 2000, the British Energy Director agreed that the MOX fuel with falsified data would be returned to the United Kingdom and that 6.4 billion yen would be paid to Japan for damages incurred because of the falsification.

The recent shipments have been protested vigorously by affected nations in many parts of the world. The Caribbean nations, for instance, have been consistently vocal in raising concerns about these shipments. In 1992, the Heads of Government of the Caribbean Community (Caricom) issued a strong statement that “shipment of plutonium and other radioactive or hazardous materials should not traverse the Caribbean Sea.” Prior to and during the 1995 shipment, a number of Caribbean countries insisted that the radioactive materials not be transported at all through the Caribbean Sea. Among the countries that specifically prohibited the Pacific Pintail from passing through their territorial seas were Antigua and Barbuda, Colombia, the Dominican Republic, and Puerto Rico. Similarly, in January 1998, the Organization of Eastern Caribbean States issued a statement calling on “the countries involved in the shipment of plutonium waste through the Caribbean region to stop these shipments forthwith.” The government of Antigua and Barbuda released its own statement denouncing these shipments, saying that they threaten “the very survival” of the Caribbean and its ecosystem and noting that the region had no contingency plan to deal with an accident, which could “have catastrophic effects” on the region. The Bahamas similarly issued a statement “categorically and unconditionally” opposing the shipment. In March 1999, the Caricom leaders agreed
upon another strong statement at their meeting in Suriname, noting the “catastrophic consequences of any accident for their peoples and the ecological systems of the Caribbean Sea,” and stating that they “totally reject” the continued use of the Caribbean “as a transit for such nuclear materials.”

Twenty-five nations of the wider Caribbean similarly issued a declaration “rejecting” these transports from their region at the April 1999 Heads of State Meeting of the Association of Caribbean States (ACS). And on July 16, 1999, when they thought the Pacific Teal/Pacific Pintail MOX shipment would be coming through the Caribbean, the Caricom Heads of Government issued a statement reiterating “their unwavering opposition and that of the people of the Caribbean to this blatant and persistent misuse of the Caribbean Sea for the transshipment of highly toxic nuclear material.”

The statement concluded by saying that the “Heads of Government have vowed to take all necessary steps to protect their people and the fragile ecology of the Caribbean Sea from this highly dangerous threat.”

Pacific Island nations have also vigorously protested these shipments. At the meeting of the South Pacific Forum in October 1999, for instance, the Pacific Island leaders expressed their concern once again and called specifically for a compensation regime to be established that would provide redress for any economic losses that the tourism and fishing industries in the islands might suffer as a result of an accident “even if there is no actual environmental damage caused.” This communique also urged members to work within the International Maritime Organization (IMO) and the International Atomic Energy Agency (IAEA) to develop “a strong regime of prior notification to, and consultation with, coastal states on planned shipments of radioactive materials and MOX fuel (consistent with security requirements), the development of a regime for the preparation of Environmental Impact Statements and Emergency Response Plans.”

New Zealand has taken a lead in protesting these shipments, arguing that they should not be permitted through New Zealand’s EEZ because of the “precautionary principle” enshrined in the Rio Declaration, and that “there should be recognition in international law of the right of potentially affected coastal states to prior notification, and, ideally, prior informed consent for shipments of nuclear material.”

South Africa has similarly registered regular protests to these shipments. In August 1999, the Regional Environment Minister for the Western Cape Province, Glen Adams, called for the shipments to end, saying: “Because the shipments are expected to continue for the foreseeable future, the risk incurred at no benefit to us will be a recurring risk. This is a risk that our province does not want to carry.”

The Indian Ocean country of Mauritius announced that the ships would not be allowed into their EEZ. Because of opposition in Korea, the 1999 shipment used the Tsuruga Strait instead of the Korean Strait.

The Current State of Affairs at the International Level

In March 1996, the IMO held a Special Consultative Meeting during which governmental and nongovernmental organizations presented their views on the risks created by these transports and the legal regime that applies to them. After that meeting, assignments were given to various international bodies to address these issues. A few issues have been satisfactorily resolved, but many of them require further examination and discussion.

Making the Irradiated Nuclear Fuel Code Mandatory

The international community has agreed that the Irradiated Nuclear Fuel (INF) Code should become binding and obligatory, although the United States’ view is that the code...
should apply only to commercial vessels. The members of the IMO decided in 1999 that
the code should be incorporated into the International Convention for the Safety of Life
at Sea (SOLAS). The INF Code regulates the packaging of the radioactive materials
and the construction, design, and staffing of the ships that transport them, but “[r]eliance
on design and packaging safeguards alone has become neither prudent nor palatable” to
many coastal countries.

Shipboard Emergency Planning

The Marine Environment Protection Committee (MEPC) has developed Guidelines for
Developing Shipboard Emergency Plans which are designed to be added to the INF
Code. The committee recognized the need for consultation with coastal states in the
development of these shipboard emergency plans. It is unclear, however, whether coastal
nations will be fully informed of these plans, so that they can develop coordinated shore-
based emergency plans.

Planning for Shore Emergencies and Creating Salvage Plans

These steps are obviously desirable endeavors to reduce the risk of accident, but no
systematic efforts have yet taken place, and the shipping and nuclear nations appear to
be reluctant to undertake these important assignments.

Avoiding Particularly Sensitive Sea Areas

Little work has been done thus far to identify particularly sensitive sea areas that must
be avoided by ships carrying ultrahazardous cargoes.

Creation of a Liability Regime

Some international treaties have been negotiated to establish a liability regime in the
event of a nuclear accident, but they provide inadequate funding and awkward proced-
dural remedies. Specific treaties imposing strict liability for nuclear accidents include
the Paris and Vienna Conventions, supplemented by the Brussels Convention and
linked by the 1988 Joint Protocol. In the case of a incident involving nuclear material
in the course of carriage, the applicable convention appears to be the treaty ratified by
the country where the relevant nuclear installation is located. The Maritime Liability
Convention exonerates others who may be responsible for damage caused by a nuclear
incident if the operator of a nuclear installation is held liable for such damage under
either the Paris or the Vienna Convention or under national law.

Many gaps exist in the current treaty framework despite the conclusion of the 1997
Protocol to the Vienna Convention and the Supplementary Compensation Convention.
Among the problems with the current regime are: the definition of damage does not
clearly include damage to the environment and consequential losses (such as fisheries
and tourism) including those outside the EEZ, an absolute liability regime needs to be
clearly applied, an international claims tribunal needs to be considered, liability for other
parties such as suppliers or financiers as well as operators needs to be addressed, liability
limitations need to be removed or modified, and additional supplementary funding
protocols need to be created. Under the current regime, victims have to bring claims in
the courts of the countries responsible for the damage rather than their own courts,
although the Convention on Supplementary Compensation would allow courts to exercise jurisdiction over nuclear incidents occurring in their EEZs. For the moment, the IMO has left the question of developing a liability regime for INF nuclear material at sea to the IAEA.

Japan, the major player in the transport of ultrahazardous radioactive materials, is not a party to any of the conventions described above.

An appropriate liability regime model may exist in the protections that have been developed for the transportation by sea of oil, but the international community has thus far failed to follow this example for the nuclear industry. After the 1967 Torrey Canyon oil tanker disaster (causing severe oil pollution of the British and French coasts), the Legal Committee of the IMO produced the 1969 Civil Liability Convention for Oil Pollution Damage and the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, which “impose strict liability on tanker owners for the escape of persistent oil from their vessels and . . . provide compensation for claims; partly funded by the shipowner concerned and partly funded by the oil industry.” Another model can be found in the 1996 Convention on the Carriage of Hazardous and Noxious Substances by Sea, which establishes strict liability (with certain shipowner defenses) but imposes a maximum potential liability; it establishes no fund but relies upon “post event collection” from the chemical industry.

The United States takes the view that there is little need for a detailed international liability regime to cover this hazardous activity.

In the unlikely event of a serious accident, liability for damages would be determined by process of law. The companies involved in the transport (the Japanese utilities, COGEMA, and BNFL) are large and well established organizations, and they have expressed confidence that they would have the financial capacity to satisfy valid claims. BNFL has explicitly confirmed to the Department of State that it believes it is adequately insured.

The Pacific Island nations do not share this confidence, however, and have repeatedly emphasized the need for a liability regime specifically designed for this new hazard. In the October 1999 communiqué issued by the South Pacific Forum, the 16-nation group emphasized the need for compensation to economic injury to the tourism and fishing industries that would result from an accident “even if there is no actual environmental damage caused.”

The international discussions on a comprehensive liability regime for the transport by sea of ultrahazardous radioactive materials have, in effect, stalled, and it is unlikely that any new instruments will emerge from current international discussions in the near future. It is crucial, therefore, that regional bodies act to protect their environments from the possible degradation and destruction that could result if any of the vessels carrying these ultrahazardous cargoes has an accident.

The next section reviews the relevant principles of international law and summarizes the issues that should be codified in such a regional protocol.

The Relevant Principles of International Law

The Governing Framework

The 1982 United Nations Convention on the Law of the Sea and its accompanying network of treaties and customary international law principles recognize a number of
specific obligations to which all users of the sea must adhere. Vessel-source pollution regulation falls largely under the framework of the SOLAS Convention and the MARPOL 73/78 Convention. The Basel Convention and regional conventions such as the Waigani Convention deal with the transboundary movement of hazardous wastes, but do not specifically address nuclear material. The IAEA Code on Transboundary Movement of Radioactive Waste and the INF Code address the movement of nuclear material. As noted above, a number of specific treaties relate to nuclear energy and liability and a number of regional conventions lay down specific principles relevant to shipments of radioactive waste. The primary international bodies dealing with this issue are the IMO and the IAEA, and the issue is also being discussed in regional bodies such as Caricom and the South Pacific Forum.

The Law of the Sea Convention contains a number of articles on both the freedom of navigation and the protection of the marine environment. Freedom of navigation is protected on the high seas (Article 87), as are the rights of innocent passage through territorial seas (Article 17), transit passage through international straits (Article 38), and navigation through the EEZ (Article 58). These navigational freedoms are often cited to counter calls to regulate ultrahazardous nuclear shipments, particularly the demand to provide advance notification of shipments. But states also have “the obligation to protect and preserve the marine environment” (Article 192) and this duty is accompanied by specific liability set out in Article 235(1): “States are responsible for the fulfillment of their international obligations concerning the protection and preservation of the marine environment [and] shall be liable in accordance with international law.”

The Duty to Avoid Causing Harm to Other States

Principle 21 of the Stockholm Declaration on the Human Environment affirmed a responsibility on states “to ensure that activities within their jurisdiction and control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction.” South Africa has cited the principle that no nation has the right to expose another to danger as one of the reasons for its opposition to the 1997 journey of the Pacific Teal. Whether or not specific harm is alleged such as radioactive contamination reaching a state through fisheries, environmental damage per se must not be disregarded.

The Duty to Protect the Marine Environment

Protection of the marine environment is now a dominant concern because of the problems of overfishing, oil and chemical spillages, toxic waste transport, and, of course, the transport of radioactive materials. Pursuant to Article 194(2) of the Law of the Sea Convention, states are to take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other states and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with the convention. The measures taken must include those designed to minimize to the fullest possible extent pollution from vessels, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and preventing intentional and unintentional discharges. These obligations have emerged as a countervailing force against the freedom of navigation, which has throughout its development been set against other rights and uses of the ocean.
Freedom of the high seas is exercised under the conditions laid down by the Law of the Sea Convention and by other rules of international law, with due regard for the interests of other states. Coastal states have jurisdiction in the EEZ for the purpose of the protection and preservation of the marine environment.

Prior Consultation

Whenever the activity of one nation may have a significant adverse transboundary environmental effect, international law requires prior and timely consultation at an early stage and in good faith, and the provision of relevant information to potentially affected states. Similarly, international law requires prior consultation whenever the activity of one nation creates a significant risk of harm to another nation. Inherent in the duty to consult is the duty to inform or notify, which is a precondition of meaningful and effective consultation. The International Court of Justice recognized this duty to inform in the 1949 Corfu Channel Case, where Albania was held to have had the duty to disclose the presence of mines in the channel. Likewise, France was required to consult in good faith with Spain over riparian rights in the 1957 Lac Lanoux Arbitration. Article 198 of the Law of the Sea Convention requires that when a state becomes aware that its activities are causing or are likely to cause damaging pollution to the marine environment, it is to immediately notify other states likely to be affected by such damage. Similarly, the Convention on Early Notification of a Nuclear Accident requires notification of nuclear accidents.

Although the duty to consult is one of the most venerable and well-established principles of international law, the shipping and nuclear nations are reluctant to acknowledge that they must consult with affected coastal nations about these ultrahazardous shipments. They argue that such consultation would interfere with freedom of navigation and may assist terrorists who wish to attack the shipments. These arguments are spurious. Consultation regarding route selection and emergency planning is in everyone's best interest and can only serve to make the shipments safer for all concerned.

Proper international consultation has several elements. The first step is to disclose the nature of the project with its attendant risks and safety measures to those states that may be affected by the activity. Preparing an environmental impact assessment is a logical way to fulfill this obligation, and preparing such a document is required by Articles 204 to 206 of the Law of the Sea Convention. Numerous other treaties also impose an environmental-assessment requirement. For example, Article 16 of the South Pacific's regional environmental treaty requires each party to assess "the potential effects of projects on the marine environment" through a process that includes public comments and widespread dissemination of results. Article 12 of the Cartagena Convention also calls for the preparation and dissemination of environmental impact assessments for any major development project that may impose harmful impacts on the region. This obligation is reinforced in Article 13 of the Caribbean's Protocol Concerning Specially Protected Areas and Wildlife, which requires each contracting party to prepare environmental impact assessments on "industrial and other projects and activities that would have a negative environmental impact."

The second step is to listen to the concerns expressed by the affected nations along with their suggestions for reducing the risks. Suggestions that are helpful and constructive should, of course, be accepted and acted upon. If the shipping states reject a suggestion, they should explain why they have rejected it.

This procedure entails no risks and can only lead to safer voyages. The coastal
states may have ideas regarding shipping lanes and weather patterns that can reduce the risks to these voyages. The Western Pacific and the Caribbean are, for instance, subject to intense storms during certain times of the year. The island and coastal states' understanding of the shipments and their cargoes can enable them to use their rescue equipment in a manner that is more likely to be helpful in an emergency. Preparing contingency plans for coastal emergencies can only be done after a full understanding of the risks involved.

A nation that is consulted about a project outside its borders that may affect it does not have a veto power over that project. But it does have the right to understand the risks it is being subjected to and to offer constructive advice to reduce those risks.

**Prior Notification**

The shipping and nuclear nations argue that prior notification is inconsistent with the freedom of navigation guaranteed under the Law of the Sea Convention. But the shipping and nuclear nations currently do, in fact, provide notification, at least to their close allies and the nations that they trust. The Japanese stated on December 18, 1997, that it would announce the route for its 1998 shipment the day after it left France. The British provided advance notification to the Panama Canal Commission regarding the 1998 shipment through the canal. The smaller Caribbean nations, however, have been left in the dark regarding these shipments, creating a two-tiered situation whereby some affected nations are treated as second-class citizens without the right to learn what is going on. Obviously, such a situation is unfair and unacceptable.

Prior notification is useful in reducing the alarm that results from unsubstantiated rumors as well as ensuring that contingency plans for dealing with coastal emergencies can be prepared in time. Prior notification for transboundary movement of hazardous materials is standard in a number of conventions, including the Basel Convention, the Bamako Convention, the IAEA Code of Practice on the International Transboundary Movement of Radioactive Waste, and the IAEA Regulations for the Safe Transport of Radioactive Material.

Prior notification requirements are not unprecedented. Denmark, Norway, and Sweden require foreign warships to provide notification before entering their territorial seas. Since 1991, the Canadian government has granted consent for U.S. nuclear-powered submarines to pass submerged through waters it regards as internal waters of Canada in the Dixon Entrance on their way to a United States Navy Acoustic testing facility in Alaska. A Canadian Order-in-Council is intended to protect Canadian sovereignty in international law over these waters by providing prior blanket consent. The United States does give prior notification of the commencement and duration of each operation and has also provided written assurances to the Canadian Government with respect to liability and compensation in the event of an accident or damage to Canadians or their property. The U.S. Navy has agreed to proceed with extreme caution in the Dixon Entrance and to minimize transits during peak fishing seasons.

Another important example is found in the 1996 Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal, signed at Izmir, Turkey, on October 1, 1996, which requires, in Article 6, the prior written consent of the transit state before hazardous wastes can be moved through its territory. Article 6(4) provides for movement through the territorial sea, which requires prior notification, following which the transit state brings to the attention of the exporting state obligations relating to passage through its territorial sea.
A recent survey of national actions listed Canada, Djibouti, Libya, Malta, Pakistan, Portugal, and the United Arab Emirates as requiring prior notification before hazardous cargoes can pass through their waters; it listed Egypt, Guinea, Iran, Malaysia, Oman, Saudi Arabia, Turkey, and Yemen as requiring prior authorization for such passage; and it listed Argentina, Haiti, Ivory Coast, Nigeria, the Philippines, and Venezuela as completely prohibiting passage by ships carrying nuclear or other inherently dangerous or noxious substances.98

At the IMO Assembly in November 1997, Ireland introduced a proposal calling for prior notification of the nuclear shipments in order to ensure emergency preparedness, stressing the severe consequences an accident would have on fisheries, agriculture, and tourism. In the discussion that followed, the Irish proposal was supported by Iceland, the Solomon Islands, Chile, and New Zealand, but was opposed by the United States, Norway, France, Japan, and the United Kingdom, while a number of countries called for further discussion.99 New Zealand, which considered the Irish proposal to be too weak, has recently articulated the position that “there should be recognition in international law of the right of potentially affected coastal states to prior notification, and, ideally, prior informed consent for shipments of nuclear material.”100

Malaysia has stated explicitly that it insists on prior authorization before any shipment of nuclear material passes through its waters, and that: “such a passage no longer constitutes ‘innocent passage’ under international law and such vessels should not access the straits of Malacca and Singapore. The straits states must be able to say no to such ships and if necessary, stop them from transit.”101

Malaysia has specifically linked its claim to stop these shipments to “the gaps in the legal regimes governing these activities. There are still no agreements regarding salvage responsibilities, liability for damages, obligations to consult, advance notification and contingency planning to handle emergencies.”102

Two European scholars, after surveying recent treaties and national actions, have said that these developments suggests “a trend towards recognition of a right of prior notification,”103 and that, in particular, “the recent Izmir Protocol (even if only a regional application) may suggest certain crystallization of a coastal State right to require such prior notification.”104

**Preparation for Foreseeable Emergencies**

The obligation to prepare for foreseeable emergency contingencies follows from the responsibility to notify other states of disasters threatening harmful effects on their environment105 and to prevent or limit damage to the environment,106 and is closely related to the precautionary principle. This need is particularly compelling with regard to activities that may potentially result in the release of radiation. Concern stemming from the Chernobyl accident gave rise to the IAEA Guidelines107 and the 1986 Notification Convention.108 The consequences of an accident involving a ship transporting radioactive material could be so serious that emergency procedures must be in place to address possible fires, collisions, and sinkings prior to these voyages taking place. These procedures must include access to appropriate ports, the availability of tugboats and firefighting equipment, and plans for retrieval in the event of a sinking.109 The international law rules on access to ports by vessels in distress are “somewhat patchy”110 and coastal nations are inevitably going to be unenthusiastic about allowing such vessels into their ports for emergency repairs because such entry “would effect the vital interests of the country, for example through the risk of exposure to radioactive contamination.”111 It thus “would
Liability

It is clear that a country creating risks that lead to damage to another country is liable to compensate the injured country, but the practical mechanisms for providing that compensation are not always in place. Because the nuclear and shipping nations are putting coastal populations and small island communities at risk in a situation where they obtain no benefit from the activity, a detailed liability regime should be developed to ensure timely compensation in case of injury. In many legal systems, including international law, when an actor engages in ultrahazardous activity and harm results, the actor is held to be strictly liable. As explained above, the current liability regime is awkward and inadequate, and a specific regime covering all foreseeable damage and ensuring adequate funding is urgently needed.

Are These International Law Requirements Consistent with Navigational Freedoms?

Innocent Passage through Territorial Seas

Although innocent passage is permitted through territorial seas, the passage must in fact be innocent. Passage is innocent so long as it is not prejudicial to the peace, good order, or security of a coastal state. Coastal states have been arguing that shipments of ultrahazardous radioactive cargoes are prejudicial to their security, thus rendering the passage noninnocent. In 1970, Canada made a similar argument with regard to regulating tanker traffic 100 miles from its Arctic coastline in passing the Canadian Arctic Waters Pollution Prevention Act of 1970, claiming the “overriding right of coastal States to protect themselves against grave threats to their environment.” South Africa’s 1981 Marine Traffic Act declares that any vessel carrying “cargo or any appliance or apparatus the use of which ... may constitute a threat against the sovereignty, territorial integrity or political independence of the Republic, shall be deemed to be not innocent.” Passage, to be innocent, must take place in compliance with coastal laws mandated by international law as well as with the Law of the Sea Convention and with other rules of international law.

A notification requirement would not be contrary to Article 24 of the Law of the Sea Convention, and states may legislate on matters relating to the safety of navigation and protection of the marine environment. Article 23 requires that ships carrying nuclear substances must observe special precautionary measures established by international agreements, and thus in effect incorporates the IAEA Code on Transboundary Movement of Radioactive Waste and harmonizes international regulation of ultrahazardous radioactive cargoes with the Law of the Sea Convention and protection of the territorial seas. Ships carrying nuclear or other inherently dangerous or noxious substances or materials can be required to confine their passage to sea lanes. The requirements that passage through territorial seas be innocent and must take place in conformity with international law, the incorporation of provisions of other conventions, the regulatory authority granted coastal states, the recognition of other international documents, and the provision for sea lanes thus give coastal states authority to protect their territorial seas from shipments of ultrahazardous radioactive material.
Protection of Marine Resources in EEZs

Navigational freedoms are protected in the EEZ, but at the same time the coastal state has responsibility to protect the marine environment.124

When combined with sovereign rights over the management of natural resources,125 this authority provides significant coastal state jurisdiction to prevent pollution126 and allows coastal states to place considerable limitations upon navigational rights if necessary to protect the marine environment.127

The patchwork of provisions in the Law of the Sea Convention relating to the EEZ reveals the competing priorities.128 Rights of navigation are qualified “subject to the relevant provisions of this Convention”129 and states are directed to “have due regard to the rights and duties of the coastal State” and to “comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part.”130

Exercising their rights under Article 310, a number of states have lodged declarations to the Law of the Sea Convention respecting the issue of ultrahazardous nuclear transports.131 On the one hand, several states (mainly nonnuclear states) consider that Articles 22 and 23 of the convention presume the existence of conventions regulating such transport and that absent such regulations prior notification or even authorization can be required. On the other hand, a number of other states (mainly nuclear states) emphasize the right of free navigation and dispute the obligations of prior consent or even notification.132 Some of these declarations confuse the issues of prior notification and prior informed consent. These issues are distinguishable, and a particularly strong argument can be presented for prior notification and consultation where potential consequences for a coastal state’s environment are serious.

The Precautionary Principle

In exercising their jurisdiction to protect and preserve the marine environment under the Law of the Sea Convention, states may and should apply the precautionary principle.

States, in accordance with the provisions of the United Nations Convention on the Law of the Sea on protection and preservation of the marine environment, commit themselves, in accordance with their policies, priorities and resources, to prevent, reduce and control degradation of the marine environment so as to maintain and improve its life-support and productive capacities. To this end, it is necessary to:

(a) Apply preventive, precautionary and anticipatory approaches so as to avoid degradation of the marine environment, as well as to reduce the risk of long-term or irreversible adverse effects upon it.133

A Chilean naval vessel challenging the 1994/1995 shipment and representing a coastal state responsible for its marine environment in the Cape Horn region, cited the precautionary principle as a primary reason for banning the Pacific Pintail from its EEZ.134

When Is Unilateral Action Permissible?

International law anticipates nations taking countermeasures to respond to violations of international law by other nations. Because no centralized international policing mechanism exists, those nations aggrieved by violations of international law by others can take
unilateral actions to protect their interests. These responses are sometimes characterized as reprisals and sometimes as countermeasures. Military reprisals are in something of a gray zone in international law; they are condemned by some United Nations General Assembly Resolutions, but nations nonetheless utilize them when necessary.

Perhaps one of the most dramatic examples of unilateral action was Israel’s bombing of an Iraqi nuclear power plant near Baghdad on June 7, 1981, based on Israel’s view that the nuclear material in the plant would be diverted to make nuclear weapons and thus that Israel was entitled to eliminate the plant as an act of self-defense. Israel has repeatedly utilized reprisals against its neighbors in response to attacks. The U.S. bombing of Libya on April 14, 1986, in response to Libyan-sponsored terrorist attacks on U.S. citizens in Europe, is another classic example of a military reprisal, although the United States avoided that term and characterized it as an act of self-defense. A more recent example is the February 16, 2001 U.S. bomb attack on five “command and control” Iraqi military sites near Baghdad, which was characterized both as an act of self-defense (to protect U.S. planes patrolling the no-fly zones) and, in the language of President George W. Bush, an act taken to force Saddam Hussein “to conform to the agreement that he signed after Desert Storm” (referring to the 1991 Gulf War).

The 1982 Law of the Sea Convention permits nations to take action to deal with threats to its resources and environment in its territorial sea and EEZ. Articles 25 and 220 authorize a coastal state to prevent passage through the territorial sea that is not innocent and, when appropriate, to criminally sanction conduct that violates its laws. Article 21(1) authorizes coastal states to enact laws to protect their living resources, preserve their coastal marine environment, and prevent pollution thereof, and 21(4) requires foreign ships to comply with such laws. Paragraphs (3) and (6) of Article 220 authorize a coastal state to detain vessels passing through the EEZ that are in violation of “applicable international rules and standards for the prevention, reduction and control of pollution from vessels or laws and regulations of that State conforming and giving effect to such rules and standards.”

A country seeking to block passage of ultrahazardous nuclear cargoes through its EEZ would thus argue that such passage violates the standards found in the Law of the Sea Convention, as explained above, that require countries to prepare environmental impact statements for matters that may cause substantial pollution, to prepare contingency plans for accidents, to consult with affected states, and to establish appropriate liability regimes for such hazards. Because these requirements are found directly in the convention itself, they are certainly “international standards” that must be complied with. The widespread “state practice” of coastal nations protesting such shipments, as described, reinforces the conclusion that these precautionary measures must precede such shipments.

The clearest precedent for unilateral action to protect coastal and marine resources was provided by action taken by the United Kingdom, the flag state of the ships now carrying these ultrahazardous cargoes, when in 1967 it bombed and destroyed the Liberian oil tanker Torrey Canyon after it ran aground in the English Channel. The United Kingdom asserted a customary international law right of intervention against vessels on the high seas threatening grave or imminent pollution. France, where the reprocessing occurs, also has provided something of a precedent when in the 1950s it seized foreign merchant ships on the high seas thought to be carrying arms to the Algerian rebel movement, citing self-defense as its justification. Another example directly related to protecting marine resources would be Canada’s use of force in 1995 to seize a Spanish fishing vessel on the high seas because the Spaniards were overfishing stocks
that straddled Canada’s EEZ, thus threatening the economic viability of the fishing industry in eastern Canada.141

Building on the inherent right of self-defense, and anticipating other situations like the Torrey Canyon disaster, countries entered into treaties after that event that allow intervention on the high seas to prevent damage to coastal resources. In 1969, the International Convention Relating to Intervention on the High Seas142 was negotiated, and in 1973 a protocol was adopted relating to Intervention on the High Seas in Cases of Marine Pollution by Substances Other than Oil.143 Article 1(1) of the 1973 protocol authorizes aggressive national action to protect coastal marine resources by empowering states to take any necessary measures on the high seas to prevent or mitigate “grave and imminent danger to their coastline or related interests from pollution or threat of pollution by substances other than oil following upon a maritime casualty or acts related to such a casualty, which may reasonably be expected to result in harmful consequences.” Churchill and Lowe have suggested that the ready acceptance of this convention might have signified that the right of intervention against vessels threatening coastal pollution had already achieved the status of an emerging rule of customary international law.144 Article 221(1) of the Law of the Sea Convention confirms this principle by authorizing states “to take and enforce measures beyond the territorial sea proportionate to the actual or threatened damage to protect their coastline or related interests, including fishing, from pollution or threat of pollution following upon a maritime casualty or acts relating to such a casualty, which may reasonably be expected to result in major harmful consequences.” Concerned coastal nations might view “acts relating to such a casualty” as including foreseeable risks created by shipments of ultrahazardous cargoes without proper advance consultation, creation of emergency contingency plans, and liability regimes, and hence might view this provision as authorizing intervention to block such shipments. If nations with flag state jurisdiction do not fulfill their obligations to “take adequate steps to control and regulate sources of serious environmental pollution or transboundary harm within their territory or subject to their jurisdiction,” then nations threatened by such lack of protective action will inevitably act to protect their threatened coastal resources.145

As an example of similar national action, the Australian Protection of the Sea (Powers of Intervention) Act 1981146 implementing the 1969 Intervention Convention empowers the Minister to “take such measures on the high seas as he considers necessary to prevent, mitigate or eliminate the danger” from pollution or threat of pollution of the sea from oil following a maritime casualty which may reasonably be expected to result in major harmful consequences.147 Similarly, South Africa has enacted the 1969 Convention into its domestic law148 and, through its Maritime Zones Act of 1994,149 has preserved its right to resort to self-defense in cases of marine pollution.150 The number of serious protests against these ultrahazardous cargoes from threatened coastal and island nations around the globe have led commentators to recognize the “emerging state practice with regard to regulating the threat of vessel-source pollution in the law of the sea.”151

The nations shipping ultrahazardous radioactive cargoes argue that they are entitled to passage rights because their shipments comply with the standards established in the International Convention on the Carriage of Hazardous and Noxious Substances152 and in SOLAS.153 But surely these treaties do not override the fundamental principles in the Law of the Sea Convention, which has been characterized as the “Constitution for the Oceans,” which requires an environmental impact statement, emergency contingency planning (including the designation of ports that will receive crippled ships and the
development of salvage capabilities), consultation, and the creation of a proper liability regime.

Malaysia's recent statement that coastal states "must be able to say no such ships and if necessary, stop them from transit," was linked explicitly to the gaps in the international legal regime governing such shipments, and Malaysia has urged the international community to take action toward "the establishment of a regime of prior notification, consultation with coastal states, environmental impact assessment, an emergency response plan and a strict liability regime that would govern damages from accidents as well as flag state responsibility and accountability." One commentator who supports the right to take military action to prevent threats to environmental resources characterizes the governing rule as follows: "When the environmental threat is immediate and threatens destruction similar in kind to an armed attack, producing property damage, loss of life, and refugee flows, a state may legally use force to address that environmental disaster internationally."

When the principles of international law are unresolved or in dispute, it is commonplace for countries to take appropriate unilateral actions to convey and protect their views. In one of the seminal international law articles, the law of the sea is described as "not a static body of absolute rules, but rather a living, growing, customary law, grounded in the claims, practices, and sanctioning expectations of nation-states. . . ." The law governing the seas is thus developed by the "continuous process of interaction in which the decision-makers of individual nation-states unilaterally put forward claims of the most diverse and conflicting character" and decision-makers in other nation-states "weigh and appraise these competing claims . . . and ultimately accept or reject them." Because of the sharp disagreements among nations concerning the law governing the shipments of ultrahazardous radioactive cargoes, it is to be expected that nations will take unilateral or coordinated actions to assert or protect their positions while international efforts to build a comprehensive regime continue. The strong protests and military actions taken, in particular, by Brazil, Argentina, and Chile provide examples of such initiatives, and they are likely to continue because of the frustrations of these nations over the lack of action by the responsible international organizations. The IMO's Legal Committee, for instance, failed to act on Argentina's 1996 proposal that a binding instrument be prepared to address the issues of liability, emergency planning, salvage, environmental protection, and good faith consultation. At about the same time, however, in October 1996, the Mediterranean nations adopted the Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal, which, in Article 6(4), explicitly prohibits the transportation of hazardous wastes through territorial seas without prior notification to and consultation with the affected coastal state. This development is significant because France is a Mediterranean nation, and its acceptance of this provision by its Mediterranean neighbors sharply undercuts the position of the maritime nations that such notification and consultation requirements are inconsistent with passage rights under the freedom of the seas doctrine.

Concerned coastal and island nations may thus conclude that they have the right to block any passage through their territorial seas and that they have the right to prior notification and consultation before any vessel can pass through their 200-mile EEZs. They can argue that they have the right to protect the resources and environment of their EEZs, that the 1982 Law of the Sea Convention requires nations to prepare and circulate environmental impact assessments prior to actions that may cause serious pollution to the marine environment, and that the duty to consult affected nations is one that has deep roots in international law.
If the shipping nations refuse to comply or cooperate, then the coastal nations will have proper grounds to use force to prevent these ships from passing through their maritime zones. In fact, the coastal nations may feel obliged to use force, because their failure to block the passage of these ships through their maritime zones may later be interpreted as acquiescence and acceptance of the vessels’ rights of passage.

**Conclusion**

"Further measures are necessary" to protect coastal nations from the risks created by these shipments of ultrahazardous radioactive cargoes, and if the measures are not adopted "through co-operation at the international level," they will be “defined unilaterally” by coastal state initiatives.161 International law now requires nations to protect the marine environment, and coastal nations are entitled to protect their coastal marine resources. Unless the shippers of these ultrahazardous cargoes engage in meaningful consultations, discuss routing alternatives, prepare environmental impact assessments, establish emergency contingency planning including the designation of appropriate ports to handle emergencies and the development of realistic salvage options, and agree to a binding and financially sound liability regime, then coastal nations will have no alternative except to act to protect their interests. It would be preferable if they acted through regional organizations, or sought to protect their marine resources through an action brought before the International Tribunal for the Law of the Sea, but if these options prove to be impossible, unilateral initiatives will probably become necessary.

**Recommendation Number 1**

**Comprehensive Regional Protocols Are Needed to Ensure the Safety of the Sea Transport of Ultrahazardous Radioactive Cargoes**

Although concerned coastal nations have raised alarms about these shipments since they began in 1992, the international response has been halting and incomplete. This process should not be seen as an adversarial situation between the shipping and nuclear nations on the one hand and the concerned coastal states on the other. It is in everyone’s interest to protect the marine environment and coastal populations. The shippers do consult with and notify many nations, but their actions leave out other affected coastal and island countries.

Regional protocols could fill the gap and ensure that these shipments conform to the standards of safety that are needed to protect coastal populations and the marine environment. These protocols should explicitly detail the duty to prepare environmental impact assessments, the duty to consult with and notify affected states, the duty to prepare shore-emergency and salvage contingency plans, the duty to protect sensitive sea areas, and the liability regime that would govern damages resulting from accidents.

More specifically, a regional regime should include the following elements:

1. The obligation to notify and consult well prior to any shipments of high-level radioactive materials through the territorial sea or EEZ of any other nation. Consultations must be held in good faith and must include discussions regarding alternative routing and emergency contingency planning.

2. The requirement to prepare an environmental impact assessment prior to such shipments. The process of preparing the assessment must be interdisciplinary and must include public input.
3. The exclusion of certain specific hazardous routes.
4. Detailed provisions on accident and emergency procedures. These procedures must include access to appropriate ports, availability of tugboats and firefighting equipment, and plans for retrieval in the event of a sinking.
5. A binding liability and compensation regime applicable to these shipments. Such a regime must not only clearly include environmental and consequential damage on a strict liability basis to a realistic level but must also spell out the conditions of liability in these circumstances, and should also include the creation or identification of a compensation fund to pay any victims of accidents, and provide an international tribunal to hear claims.

A model draft protocol is included in Appendix to assist nations in thinking about the proper way to address these important issues.

**Recommendation Number 2**

**Concerned Nations Should Bring a Claim against France, Japan, and the United Kingdom Utilizing the Dispute Resolution Procedures in the Law of the Sea Convention**

Part XV of the Law of the Sea Convention establishes mandatory dispute resolution procedures. This innovative mechanism is just now beginning to be utilized by the contracting parties. Article 297(1)(b) authorizes coastal and island states to bring claims against shipping nations whenever “it is alleged that a State in exercising [its navigational] freedoms, rights, or uses has acted in contravention of this Convention or of laws or regulations adopted by the coastal State in conformity with this Convention and other rules of international law not incompatible with this Convention.”

A claim could be brought by concerned coastal states contending that the shipping nations (France, Japan, and the United Kingdom) have violated:

1. their duties under Articles 204–206 to prepare and disseminate an environmental impact statement (because “planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment”);
2. their duty to consult affected states, including specifically their duty under Article 199 to “jointly develop and promote contingency plans for responding to pollution incidents in the marine environment”;
3. their general duty under Articles 192 and 235 to “protect and preserve the marine environment,” including the more specific duty under Article 194(5) “to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life”; and
4. their more specific duty under Article 235(3) to create an appropriate liability regime, including the “development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.”

Under Article 287, each contracting party is instructed to choose one or more of four possible “means for the settlement of disputes”: (a) the International Tribunal for the Law of the Sea (ITLOS), (b) the International Court of Justice (ICJ), (c) a five-member arbitral tribunal established pursuant to Annex VII of the Convention, or (d) a “special arbitral tribunal” established pursuant to Annex VIII (designed for specialized disputes requiring scientific expertise, including “protection and preservation of the
marine environment” and “navigation, including pollution from vessels and by dumping”). If a contracting party does not indicate its preference, it shall be deemed, under Article 287(3), to have accepted the Annex VII arbitral tribunal. The United Kingdom has indicated its choice for the ICJ. Japan and France have not yet indicated a preference. Under Article 296, decisions rendered by a court or tribunal under these procedures “shall be final and shall be complied with by all the parties to the dispute.”

Because of the United Kingdom’s selection of the ICJ as its mechanism of choice, while France and Japan have not made any selection, thus triggering the Article VII arbitral tribunal as the default choice, it may be necessary to proceed separately against the United Kingdom in the ICJ and against France and Japan in an arbitral tribunal. It appears from the language of Article 290 that the ICJ could issue preliminary measures against the United Kingdom, and the ITLOS could issue preliminary measures against France and Japan if an arbitral tribunal is not established within two weeks of the filing of the complaint. It would be preferable, of course, if the countries could agree upon a single tribunal for this adjudication, but, if not, it may be necessary to proceed in two separate venues.

This new dispute resolution procedure in the Law of the Sea Convention is now open for business, and the dispute regarding the obligations of the nations transporting ultrahazardous radioactive materials by sea appears to be an appropriate one for mandatory dispute resolution.

Notes
10. Although the odds of any given ship sinking are small, vessels sink regularly, and frequently are irretrievable. In December 1997, for instance, the MSC Carla sank near the Azores in the Atlantic carrying radioactive cesium destined for medical purposes, but retrieval was not attempted.
Sea Transport of Ultrahazardous Radioactive Materials


15. Howard W. French, *Atom Plant Cuts Corners on Safety, Japan Is Told*, N.Y. Times, Oct. 4, 1999, at A8, col. 1 (nat’l ed.). “[T]he workers were not only pouring uranium fuel from steel buckets with their hands, rather than with measuring machines ordinarily used, but they were also using more than three times the appropriate concentration of the radioactive material. On top of this, the workers are known to have mixed more than 35 pounds of uranium fuel into a nitric acid solution, rather than 5.2 pounds. That set off what the industry calls a criticality event, or a chain reaction involving the fission of deadly nuclear materials.” Id. “The police have indicated that they will pursue criminal charges against the plant’s operators.” Id. In 1997, another plant in Tokaimura suffered a fire and explosion that contaminated 35 workers with radiation. Id.


23. Statement issued by Colombian Ministry of Foreign Affairs, March 2, 1995, stating that the “introduction into the national territory of nuclear waste and toxic wastes” is prohibited under the terms of the national constitution.


31. Id.

32. See the listing of protests in Van Dyke, supra note 12, at 386.

34. Id., para. 33.
36. Quoted in Lovell, supra note 9.
38. The IMO Code for the Safe Carriage of Irradiated Nuclear Fuel (INF), Plutonium (Pu) and High-Level Radioactive Wastes (HLW) in Flasks on Board Ships, IMO Resolution A 18/Res. 748, Annex, adopted by the 18th Assembly of the International Maritime Organization on Nov. 4, 1993 (INF Code), described at www.imo.org/HOMFJhtml under “Safety” and then “Other Safety Topics” (site visited June 18, 2001).
   The IMO’s Marine Science Committee and its Marine Environment Protection Committee formally decided to add the INF Code to this treaty in May 1999, with the matter taking effect in 2001.
43. Vienna Convention on Civil Liability for Nuclear Damage, adopted at Vienna on May 21, 1963, entered into force Nov. 12, 1977, www.iaea.or.at/worldatom/Documents/Infcires/1996/inf500.shtml (site visited June 17, 2001). The United Kingdom is a party, but France and Japan are not. “Nuclear installation” is defined in Article 1(j) to mean, apart from nuclear reactors and factories using nuclear fuel for the production of nuclear material or processing of nuclear material, “(iii) any facility where nuclear material is stored, other than storage incidental to the carriage of such material.” Thus nuclear transports would not qualify as “installations” under the Vienna Convention. This is mirrored by the Paris Convention, supra note 42, and is supported by the language of the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, IAEA Doc. INFCIR/402, Article III.3, www.nea.fr/html/law/nlbrussels/html (site visited June 17, 2001), see infra note 45.
45. Joint Protocol, supra note 43. France and the United Kingdom are parties. In an effort to address the lack of membership, the Joint Protocol allows victims in states party to either convention and the joint protocol to bring claims against another such state in which an operator is liable.
46. That is, the installation from which the material originated or to which it is sent, according to the rules in Article II.1(b) of the Vienna Convention, supra note 43, Article 4(a) and (b) of the Paris Convention, supra note 42, and Joint Protocol, supra note 43, Article III.3.

48. Provided the national law is in all respects as favorable to persons who may suffer damage as either the Paris or the Vienna Convention.

49. The Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage adopted on Sept. 12, 1997 alters the definition of damage, increasing liability limits and extending time limitation periods. This agreement is described in Australian Department of Foreign Affairs and Trade, International Civil Nuclear Liability Arrangements, www.dfat.gov.au/security/civil_liability.html#amendments (site visited June 17, 2001).

50. The Convention on Supplementary Compensation for Nuclear Damage, adopted on Sept. 12, 1997, described in Australian Foreign Affairs, supra note 49. Note that compensation to victims in noncontracting parties may be excluded in the Convention on Supplementary Funding.


52. The MEPC noted (MEPC 40/15 20 June 1997 at 9) that the IAEA should be given the time to complete its work and it would not be a useful employment of the Legal Committee's time to work on the same issues.


57. Griggs, supra note 55, at 351.


60. See Wonham et al., supra note 11, at 293: “In the authors' opinion, the action taken by IMO since 1993 on the supplementary issues connected with INF transport has progressed very little.”


62. SOLAS, supra note 39.


65. Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes Within the South Pacific Region, Waigani, Sept. 16, 1995, www.forumsec.org.fj/docs/wc.htm (site visited June 17, 2001). This convention has been ratified by seven countries but is not yet in force. The Waigani Convention requires contracting parties to prohibit the import of hazardous and radioactive wastes and establishes mandatory notification procedures for transboundary movements of nonradioactive hazardous waste.

66. The issues related to the applicability of the Basel Convention to radioactive wastes are discussed in Van Dyke, supra note 12, at 383–385. The Basel Convention asserts that it does not apply to nuclear cargoes covered by other international agreements. Because nuclear cargoes are not adequately covered by other international agreements, it would appear that the rules of the Basel Convention (which require notice and prior consent for transit across the territories of other countries) apply to them.


68. INF Code, supra note 38.


70. See also Principle 2 of the 1992 Rio Declaration on Environment and Development, June 14, 1992, U.N. Doc. A/CONF.151/5/Rev.1(1992), 31 I.L.M. 874 (1992), and Restatement (Third) of Foreign Relations Law, Section 601 (1987). Philippe Sands, Principles of International Environmental Law I (1995) at 186 concludes that taken together Principle 21 and Principle 2 "establish the basic obligation underlying environmental law and the source of its further elaboration in rules of greater specificity." The International Court of Justice has referred to "every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States." Corfu Channel Case (United Kingdom v. Albania), 1949 I.C.J. 4. This rule is also the central principle relied upon in the Trail Smelter Arbitration, 3 UN R. Int'l Arb. Awards 1905, 1938 (1941), which held that "no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another."


72. See also Law of the Sea Convention, supra note 61, Article 194(1), which provides that states are required to take measures that are "necessary to prevent, reduce and control pollution of the marine environment from any source," and "they shall endeavour to harmonize their policies in this connection."

73. Id., Article 194(3)(b). The measures taken in accordance with Part XII “shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life." Id., Article 194(5). The Caribbean nations have promoted these goals through their Protocol on Specially Protected Areas and Wildlife, supra note 41.

in 1950 emphasized that the freedom of navigation must be viewed against the reasonable re-
quirements of economic life and scientific progress. Hersh Lauterpacht, Sovereignty Over Subma-
rine Areas, 27 British Yearbook of International Law 376 (1950).

75. Law of the Sea Convention, supra note 61, Article 87.

76. Id., Article 56(1). "In exercising its rights and performing its duties under the Conven-
tion in the exclusive economic zone, the coastal State shall have due regard to the rights and
duties of other States and shall act in a manner compatible with the provisions of this Conven-
tion." Id., Article 56(2).

77. Rio Declaration, supra note 70, Principle 19: "States shall provide prior and timely
notification and relevant information to potentially affected States on activities that may have a
significant adverse transboundary environmental effect and shall consult with those States at an
early stage and in good faith."

78. See Restatement (Third) of Foreign Relations Law, Section 601, Comment e (1987).

79. As to the obligation to notify under customary international law as an aspect of the
principle of good faith, see Hans Lammers, Transfrontier Pollution and International Law 110
(Hague Academy of International Law, Centre for Studies and Research in International Law and
International Relations, 1986).

80. Corfu Channel Case, supra note 70.


82. The Convention on Early Notification of a Nuclear Accident, IAEA Doc. INFCIRC/
1370 (1986). Japan, the United Kingdom, and France are parties to this convention.

83. Convention for the Protection of the Natural Resources and Environment of the South

84. Convention for the Protection of the Marine Environment of the Wider Caribbean Re-
gion (the Cartagenan Convention), March 24, 1983, TIAS No. 11,085, 22 I.L.M. 227 (1983)
(entered into force Oct. 11, 1986).

85. Protocol Concerning Specially Protected Areas and Wildlife, supra note 41, discussed in

86. On July 2, 1999, in response to questions posed by Diet member Mizuho Fukushima,
the Oceans Division of the Japanese Ministry of Foreign Affairs said that no environmental
impact assessment had been prepared for the nuclear shipments because: "There is no rational
reason why any actual contamination would come about. Our understanding is that the shipment
meets IAEA and IMO standards." Such an optimistic approach seems ill-advised in light of the
numerous accidents that have occurred in Japanese nuclear facilities in recent years. In addition to
the radiation leaks at Tokaimura mentioned above (supra text at notes 14–16), a cracked pipe
leaked radiation in Tsuruga on July 12, 1999, exceeding safety limits by 11,500 times, and more
than a ton of volatile liquid sodium leaked from a cooling system at Tsuruga on December 8,
1995. At the Tokyo Electric Power Co. site about 135 miles northwest of Tokyo, the cooling
pump stopped working on April 6, 1998, and a leak occurred on July 19, 1997. On November
20, 1997, a fire broke out at a uranium-enrichment laboratory northeast of Tokyo. Recent Acci-

87. Jean-Louis Ricaud, vice-president of the French nuclear company Cogema, has said that
the shippers had "informed everybody who needed to be informed" about the 1998 shipment.
Cited in MacLachlan, supra note 8, at 6.


89. Letter of John A. Mills, Secretary, Panama Canal Commission, to Paul Leventhal, Nuclear
Control Institute, Jan. 28, 1998.

90. Basel Convention, supra note 64.

91. Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary

92. IAEA Code, supra note 67.


95. The United States claims the northern portion as U.S. territorial waters.


99. This summary was provided by Simon Carroll, Greenpeace observer at the meeting, on Nov. 20, 1997.

100. Letter from Don McKinnon, New Zealand Minister of Foreign Affairs and Trade, to Michael Szabo, July 7, 1999.


102. Id.

103. Hakapaa and Molenaar, supra note 98, at 142.

104. Id. at 144; Izmir Protocol, supra note 97.


106. See Sands, supra note 70, at 194–95, citing particularly the Stockholm Declaration, supra note 69, Principles 6, 7, 15, 18, and 24, the 1978 UNEP Draft Principles, Principle 1, and the 1982 World Charter for Nature, together with a growing network of specific environmental conventions, as well as the Trail Smelter Arbitration, supra note 70, and the Lac Lanoux Arbitration, supra note 81.


108. See supra note 82.

109. Present IAEA regulations and working groups require preparation for only a 200-meter immersion of lost flasks and exclude plans for recovery from other than the continental shelf.

110. Wonham et al., supra note 11, at 296.

111. Id.

112. Id. at 299.

113. This requirement appears to have been recognized as a principle of international law in the Trail Smelter Arbitration, supra note 70, and the Corfu Channel Case, supra note 70.

114. See text accompanying notes 42–60.


116. See 9 I.L.M. 543 for the text of the bill which was later enacted into force.


118. Law of the Sea Convention, supra note 61, Article 19(1).

119. Id., Article 24(1) provides, inter alia, that coastal states may not impose requirements
on foreign ships which have the practical effect of denying or impairing the right of innocent passage; or discriminate in form, or in fact against the ships of any state or against ships carrying cargoes to, from or on behalf of any State.

120. Id., Article 21(1) provides that coastal states “may adopt laws and regulations, in conformity with the provisions of the Convention and other rules of international law, relating to innocent passage through the territorial sea,” in respect of (inter alia) “the safety of navigation and the regulation of maritime traffic,” “the conservation of the living resources of the sea,” and “the preservation of the environment of the coastal State and the prevention, reduction and control of pollution thereof.”

121. Although voluntary, the IAEA Code, supra note 67, can be seen as a measure established by international agreement for some purposes. The Code’s Article III(3) provision that it is the sovereign right of every state to prohibit the movement of radioactive waste into, from, or through its territory must therefore have some meaning.

122. Some flag states may argue that this provision would by implication permit passage, but it must be noted that this provision does not in itself render passage innocent that is otherwise noninnocent for reasons under Article 19. Article 23 simply provides that when there is innocent passage, the indicated measures apply.

123. Law of the Sea Convention, supra note 61, Article 22(2).

124. Id., Article 56(2) provides that states are to have due regard to the rights and duties of other States and are to act in a manner compatible with the provisions of the Convention. See discussion in D. Attard, The Exclusive Economic Zone in International Law 43-69 (1987).

125. Law of the Sea Convention, supra note 61, Article 56(1)(a).

126. Attard, supra note 124, at 94.


128. Law of the Sea Convention, supra note 61, Article 55 establishes a specific legal regime and Article 56 lays down rights, jurisdiction, and duties of the coastal state, while Article 58 lays down the rights and duties of other states in the EEZ.

129. Id., Article 58(1).

130. Id., Article 58(3).

131. Article 310 of the Law of the Sea Convention, supra note 61, allows countries to file “declarations or statements” when they sign, ratify, or accede to the Convention, so long as “such declarations or statements do not purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that State.” The countries, such as Saudi Arabia and Malaysia, that have filed declarations on Article 22 and 23 have done so to present their understandings of the meaning and application of those articles, in a situation where the text of the Convention is somewhat ambiguous. Such action would appear to be consistent with Article 310, and, indeed, appropriate to bring clarity to a situation that otherwise would remain in a state of confusion.

132. For instance, Malaysia, www.un.org/Depts/los/los_decl.htm#Malaysia, cited the inherent danger entailed in the passage of nuclear-powered vessels or vessels carrying nuclear material or other material of a similar nature. Thus, the Malaysian Government “requires the aforesaid vessels to obtain prior authorization of passage before entering the territorial sea of Malaysia until such time as the international agreements referred to in article 23 are concluded and Malaysia becomes a party thereto. Under all circumstances, the flag of State of such vessels shall assume all responsibility for any loss or damage resulting from the passage of such vessels within the territorial sea of Malaysia.” The United Kingdom www.un.org/Depts/los/los_decl.htm#United Kingdom stated that it considers that declarations and statements not in conformity with Articles 309 and 310 include “those which purport to require any form of notification or permission before warships or other ships exercise the right of innocent passage or freedom of navigation or which otherwise purport to limit navigational rights in ways not permitted by the Convention.”

133. Agenda 21, Chapter 17, para. 17.22, in Report of the United Nations Conference on
Coastal states have the specific right "to adopt and enforce nondiscriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance." Law of the Sea Convention, supra note 61, Article 234. This provision could strengthen Chile and Argentina's claim to ban highly radioactive nuclear carriers from their EEZs.


Another relevant French action occurred after the 1978 Amoco Cadiz disaster, when "French Prefectural decrees banned vessels over 1,600 tons from coming within 7 nautical miles of the coast around Cherbourg and Brest as well as instituting mandatory reporting of entry, destination and cargo." Nadelson, supra note 40, at 224 n. 189 (citing Joint Prefectorial Decree 326 Cherbourg/18/81 Brest of May 13, 1981).


Churchill and Lowe, supra note 115, at 262. See also Nadelson, supra note 40, at 205 n. 68.

Nadelson, supra note 40, at 206 (quoting Alan Boyle, Nuclear Energy and International Law: An Environmental Perspective, 30 British Yearbook of International Law 258, 269 [1989]).


Australian Protection of the Sea Act, id., section 8(1). Powers include powers to sink, salvage, repair, remove or otherwise deal with the ship and contents, and the Minister may give directions to the owner, master or salvor in relation to the vessel (sections 11-17). Similar powers are given in relation to a danger from substances other than oil. Australian Protection of the Sea Act, section 9(1) giving effect to the 1973 Protocol. (See supra note 143.) The 1973 Protocol, Article 1(2) defines other substances to include substances in an annex and substances "which are liable to create hazards to human health, to harm living resources and marine life, to damage amities or to interfere with other legitimate uses of the sea."
150. See Wardley, supra note 117, at 114.
151. Nadelson, supra note 40, at 222 (citing, in particular, the Joint Declaration of Brazil, Argentina, Chile and Uruguay about Radioactive Waste Transport issued by the Brazilian Foreign Ministry to the IAEA, Jan. 17, 1997, Communication of Feb. 28, 1997, INF Circ/533, which indicated that international law justified unilateral action).
152. Hazardous and Dangerous Substances Convention, supra note 56.
153. See supra note 39.
155. Id.
159. See Statement by Argentina (on behalf of its own delegation, plus those of Australia, Brazil, Chile, Colombia, Cuba, Spain, Indonesia, Ireland, Solomon Islands, Mexico, New Zealand and Venezuela) calling for a “a comprehensive Code on the measures addressing the concerns dealt with in this meeting, through the establishment of a binding instrument.” Draft Proceedings of the Special Consultative Meeting of Entities Involved in the Maritime Transport of Materials Covered by the INF Code, SCM 5, at 602 (March 4–6, 1996).
161. Nadelson, supra note 40, at 244.

Appendix 1: Protocol on the Prevention of Pollution by Sea Transport of Radioactive Materials

The Contracting Parties to the present Protocol,

Being Parties to the [other relevant regional environmental convention],

Conscious of the danger threatening the environment and resources of the region caused by the sea shipment of radioactive materials,

Taking into account the 1992 Rio Declaration on Environment and Development and especially Principle 14 which declares that States “should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities or substances that cause severe environmental degradation or are found to be harmful to human health,” as well as Principle 15, which declares that “the precautionary approach shall be widely applied,”

Aware of the growing international concern regarding the need to ensure that environmental hazards originating in one State are not transferred to other States and of the need to reduce transboundary movement of hazardous materials to a minimum as far as possible,

Recognizing also that every State has the sovereign right to ban the entry, transit, or disposal of hazardous materials in its territory, as well as the responsibility to protect the resources in its exclusive economic zone from pollution or degradation,


Have agreed as follows:

Article 1
DEFINITIONS

For the purposes of this Protocol:

(a) “Convention” means the [regional environmental convention];
(b) A “Party” means a Contracting Party to this Protocol;
(c) “Radioactive materials” means any material containing or contaminated by radionuclides, the radionuclide concentration or properties of which result from human activity; this definition includes all materials generated by nuclear power plants or nuclear weapon manufacturing facilities that are disposed of, intended to be disposed of, or required to be disposed of by the provisions of national law; it also includes all materials designed or intended to be used as a fuel or explosive material in any nuclear power facility or any nuclear weapon; this definition does not, however, include the radioactive fuel in the nuclear reactor of a nuclear-powered vessel or the nuclear material in an existing nuclear weapon;
(d) “Sea shipment” means the movement of radioactive materials by sea vessel from an area under the national jurisdiction of one State to or through an area under the national jurisdiction of another State or to or through an area not under the national jurisdiction of any State;
(e) “Area under the national jurisdiction of a State” means any land, marine area, or airspace within which a State exercises administrative and regulatory responsibilities in accordance with international law in regard to the protection of human health or the environment;
(f) “Secretariat” means the division within the United Nations Environment Programme that is responsible for the [relevant regional convention].

Article 2
PROTOCOL AREA

This Protocol shall apply in the “Convention Area” defined in Article  of the Convention.

Article 3
SCOPE OF THE PROTOCOL

This Protocol shall apply to the shipment by sea of all radioactive materials as defined in Article 1.
Article 4

GENERAL OBLIGATIONS

1. The Parties shall take all appropriate measures to prevent, abate, and eliminate pollution in the Convention Area that can be caused by the sea shipment of radioactive materials.

2. The Parties agree that no sea shipments of radioactive materials will be permitted to pass into or through the Convention Area unless the obligations to notify and consult with the affected Parties are complied with (as required in Article 5 of this Protocol), unless a comprehensive environmental impact assessment is prepared (as required in Article 6 of this Protocol), unless emergency contingency plans are prepared (as required in Article 7 of this Protocol), and unless a comprehensive and realistic liability regime is established (as required in Article 8 of this Protocol).

3. The Parties agree that no radioactive materials can be permanently sited or disposed of at any location in the Convention Area, whether on land, in the sea, or in the atmosphere; the Parties further agree that they will individually enact national laws to prohibit the importation of radioactive materials into their territory, provided that such laws can permit the importation of limited amounts of radioactive materials needed for medical purposes.

4. The Parties agree to cooperate with United Nations agencies and other international and regional organizations in order to prevent illegal shipments of radioactive materials, and shall take appropriate measures to achieve this goal, including enacting criminal punishment measures in accordance with their national legislation and taking the additional steps required in Article 9 of this Protocol.

Article 5

THE DUTY TO NOTIFY AND CONSULT

1. The Parties agree that no shipment of radioactive material will be permitted to pass into or through the Convention Area unless the government whose flag the ship is flying formally notifies all States with land territory within 200 nautical miles of any part of the ship’s route at least 60 days prior to the ship’s passage.

2. The Parties further agree that the notification required by this Article must be followed by face-to-face consultations between appropriate governmental officials of the flag State and the State whose land territory the ship will be passing within 200 nautical miles, and that these consultations must occur at least 30 days prior to the ship’s passage. These consultations must be good faith discussions that include the sharing of relevant information (including the principles of international law and the domestic law principles relevant to the shipments of radioactive materials), listening to the views of the other State, and responding to the views and suggestions presented.

Article 6

THE DUTY TO PREPARE AN ENVIRONMENTAL IMPACT ASSESSMENT

1. The Parties agree that no shipment of radioactive material will be permitted to pass into or through the Convention Area unless the government whose flag the ship is flying,
or the owner of the radioactive materials being transported, prepares a comprehensive environmental impact assessment and distributes it at least 60 days prior to the ship’s passage to all the governments of all States whose land territory is within 500 nautical miles of any point of the ship’s route.

2. The Parties further agree that the environmental impact assessment required in this Article must include: (a) a full description of radioactive materials being transported and the reasons why the shipment is deemed to be necessary, (b) a description of the route being taken and a comparison of the environmental impact of this route with other possible routes that could be taken, (c) the probable impact of the shipment on the environment if the shipment proceeds as planned with no accidents or unforeseen events, (d) an assessment of all credible accident scenarios and their probable impact on the environment including an explanation of all the tests that have been undertaken to analyze the safety of the vessel and its containers and the possibilities of recovering the radioactive materials in the event of a sinking, and (e) an assessment of all credible adverse weather conditions, such as hurricanes and tsunamis (tidal waves), and the probable impact on the environment if the vessel passes through each possible adverse weather condition.

3. The Parties also agree that the environmental impact assessment required in this Article must be the product of interdisciplinary analysis, whereby the scientific data are analyzed in conjunction with the impact on the human communities that may be affected by pollution caused by the shipments. In order to ensure this result, the Parties agree: (a) that a draft environmental impact assessment must be made available for public scrutiny, (b) that opportunities for public input and criticism must then be permitted, and (c) that the authors of the assessment must respond to each written and oral comment in the process of revising its draft and preparing the final environmental impact assessment.

Article 7
THE DUTY TO PREPARE EMERGENCY CONTINGENCY PLANS

1. The Parties agree that no shipment of radioactive material will be permitted to pass into or through the Convention Area unless the government whose flag the ship is flying has previously met with the government of each State with land territory within 200 nautical miles of any part of the ship’s route at least 60 days prior to the ship’s passage and has prepared a mutually-agreed-upon emergency contingency plan to address and contain any credible accident that may occur in that area.

2. The Parties further agree that the emergency contingency plans required by this Article must include: (a) a designation of a port or ports that can assist in handling any credible accident that may occur, (b) a designation of emergency rescue vessels that can assist in reducing the damage that may be caused by any such credible accident, (c) a description of salvage techniques that can be used, and (d) a designation of salvage rescue groups that can be summoned to salvage any radioactive material that may sink as a result of an accident or other unforeseen event.

Article 8
THE DUTY TO CREATE A COMPREHENSIVE LIABILITY REGIME

1. The Parties agree that no shipment of radioactive material will be permitted to pass into or through the Convention Area unless the government whose flag the ship is flying
has ratified a treaty establishing a comprehensive and realistic liability regime to provide compensation for the victims of any damage that may result from an accident or other unforeseen event.

2. The Parties further agree that the comprehensive liability regime required in this Article: (a) should be based on the concept of strict liability (because radioactive materials are ultrahazardous), (b) should not contain any limitation on liability, (c) should define “damage” to include economic losses that result from incidents and accidents that do not include the release of ionizing radiation, and (d) should include the establishment of a monetary fund by the shippers of radioactive materials that will contain adequate amounts of money to compensate the victims of any credible accident scenario or other unforeseen event.

Article 9

ILLEGAL TRAFFIC

1. The Parties agree that any shipments of radioactive materials in the Convention Area in contravention of this Protocol or of any other rules of international law shall be deemed to be illegal traffic.

2. Each Party agrees that it will introduce appropriate national legislation to prevent and punish illegal traffic, and that such legislation will impose criminal penalties on all persons involved in such illegal activities.

3. Each Party agrees that it will circulate all information it obtains regarding illegal traffic to the Secretariat, which will distribute the information to all Contracting Parties.

4. Each Party agrees that it will not grant any fishing licenses to any vessel that is flying the flag of (or that is beneficially owned by a citizen or corporation of) any State whose ships have engaged in illegal traffic in the Convention Area unless and until that State: (a) has agreed to conform to the requirements of this Protocol and (b) has ensured that all fines and other criminal penalties imposed on the offending vessels have been paid and complied with.

Article 10

INFORMATION TO AND PARTICIPATION OF THE PUBLIC

The Parties agree that all the information they receive regarding sea shipments of radioactive materials, environmental impact assessments, emergency contingency plans, and liability regimes will be made available in a timely fashion to the public.

Article 11

LIABILITY AND COMPENSATION

The Parties agree to cooperate with each other and with other interested States in establishing a comprehensive and realistic liability and compensation regime for damage that may result from the sea shipment of radioactive materials. The Parties further agree that this regime shall be based on the principles identified in Article 8(2) of this Protocol.
Article 12

INSTITUTIONAL ARRANGEMENTS

The Parties designate the Secretariat to coordinate the responsibilities undertaken in this Protocol, including the exchange of information, and to conduct periodic meetings of the Parties to evaluate the effectiveness of the Protocol and to discuss methods of strengthening it.

Article 13

AMENDMENTS

This Protocol can be amended in the same manner identified for amending the Convention in Article ___ of the Convention.

Article 14

SETTLEMENT OF DISPUTES

The Parties agree that disputes regarding the interpretation or application of this Protocol can be settled in the manner identified in Article ___ of the Convention. If these methods are unsuccessful, the disputing States can, upon mutual agreement, submit their dispute to the International Tribunal for the Law of the Sea or the International Court of Justice.

Article 15

ENTRY INTO FORCE

This Protocol shall enter into force on the 30th day following the date of deposit of at least ten instruments of ratification, acceptance, approval, or accession.